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ABSTRACT

This study examines the stability of teacher effectiveness over a two-year period and its relation to emphasized reading skills. Data gathered in 1974 and 1976 for all third-grade and sixth-grade reading teachers at an Indiana school identified teacher effectiveness in reading instruction, instructional emphases, and any trends that might have accounted for varying levels of pupils' reading achievement. The following conclusions were drawn: Teacher effect on pupils' reading achievement is stable over a two-year period. Elementary school teachers who are effective teachers of reading place greater emphasis on ongoing diagnosis, comprehension following reading, structured reading activities, and reading application. Elementary teachers who became more effective during the two-year period placed greater emphasis on these instructional elements than did those teachers who became less effective. (Author/RL)

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STABILITY OF TEACHER EFFECT ON PUPILS' READING ACHIEVEMENT OVER A TWO YEAR PERIOD AND ITS RELATION TO INSTRUCTIONAL EMPHASES

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ABSTRACT

STABILITY OF TEACHER EFFECT ON PUPILS' READING ACHIEVEMENT OVER A TWO YEAR PERIOD AND ITS RELATION TO INSTRUCTIONAL EMPHASES

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Problem: Is teacher effect on pupils' reading achievement stable over a two year period and do stable teachers associated with high achieving pupils of reading place greater emphases on selected reading skills than teachers associated with average achieving pupils and low achieving pupils of reading?

Objectives: The objectives of this study were to determine if: (1) teacher effect on pupils' reading achievement is stable over a two year period. (2) teachers identified as highly effective predicted effective, and less effective teachers of reading in 1974 report similar instructional emphases in their reading instruction in 1976. (3) teachers identified as highly effective teachers of reading report significantly different instructional emphases than teachers identified as predicted effective and less effective teachers of reading.

Procedures: In 1974, data were gathered on all third and sixth grade teachers in the Fort Wayne Community School System, Fort Wayne, Indiana. These data were used to identify the effectiveness of these teachers in their reading

instruction, to determine their instructional emphases in reading, and to identify any trends to account for varying levels of pupils' reading achievement. Identical data were gathered in 1976. Instructional emphases in reading instruction were determined through the use of an investigator developed questionnaire, Survey of Teachers Emphase in Reading Instruction (STERI).

Results: Product moment correlation between a random sample of teacher's 1974 deviation and their 1976 deviation from predicted mean class reading achievement was significant at the .01 level.

Analysis of variance to test differences in mean emphases reported by teachers identified as highly effective, predicted effective, and less effective both in 1974 and 1976 resulted in significant differences ($p < .15$) for the STERI subcategories ongoing diagnosis, comprehension following reading, structured reading activities, and reading application. Further analysis of variance to test differences in mean emphases reported by 1974 predicted effective teachers who shifted to highly effective or less effective in 1976 was conducted. Significant differences were noted at .15 level for the same four categories of the STERI as the stable teachers. For both analyses the means favored the highly effective teachers.

Conclusions: (1) Teacher effect on pupils' reading achievement is stable over a two year period.

(2) Highly effective elementary reading teachers place greater emphases on ongoing diagnosis, comprehension following reading, structured reading activities, and reading application.

(3) Elementary reading teachers who, over a two year period, shift to [illegible]ly effective from predicted effective place greater emphases on ongoing diagnosis, comprehension following reading, structured reading activities, and reading application than do predicted effective teachers who shift to less effective.

STABILITY OF TEACHER EFFECT ON PUPILS' READING ACHIEVEMENT OVER A TWO YEAR PERIOD AND ITS RELATION TO INSTRUCTIONAL EMPHASES

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A general conclusion of research on teacher effectiveness in reading instruction is that the most important variable with respect to pupils' achievement is the teacher (Bond and Dykstra, 1967). Limited attention however, has been given to the role of the classroom teacher in producing student achievement gains in reading (Rutherford, 1971; Farr and Weintraub, 1975). Not only are studies that focus on teachers and their effect on pupils' reading achievement small in number, many of them do not investigate the process of instruction in relation to the product.

Hypotheses

Rosenshine (1970), McNeil and Popham (1973), and Saadeh (1970) suggest that researchers are not looking at teacher effects as they produce modifications in the learner. They assert that researchers are focusing on readily available criteria and hoping that these reflect an outcome criterion. Thus, it was decided that stability of teacher effect in reading should be determined first and then instructional process variables that could account for varying teacher effect could be explored.

One possible explanation for one teacher having a greater effect on pupils' reading achievement than another could be the emphases that the effective teacher gives to the various aspects of a self-contained developmental reading program. That is, the more effective teacher could give greater emphases to comprehension, diagnosis, oral reading, word attack, and so forth. Thus, nine hypotheses were tested, eight of which had the same format: Highly effective stable teachers report greater emphases on (1) specific diagnosis, (2) ongoing diagnosis, (3) comprehension readiness, (4) comprehension post reading, (5) comprehension above the literal level, (6) reading application, (7) structured reading activities, and (8) oral reading than do predicted effective stable teachers and less effective stable teachers. The ninth hypotheses was: There is not stability between teacher's effect on pupils' reading achievement over a two year period.

Procedure

In the spring of 1974, all third and sixth-grade teachers teaching reading in a self-contained classroom in the Fort Wayne Community School System, Fort Wayne, Indiana were identified as highly effective, predicted effective, or less effective teachers of reading through the use of a least squares prediction line (Glass and Stanley, 1970). All of these teachers used a basal approach as

their primary means of reading instruction. Two prediction lines were generated, one for third grade classes and one for sixth grade classes. Both prediction lines were based on class mean IQ scores determined by the Otis Lennon Mental Ability Test, Form J, administered in the fall of 1974 and the mean class reading achievement score determined by the SRA Achievement Series, administered in the spring of 1974. Individual classes were plotted in relation to the prediction line. A teacher whose class reading achievement mean was greater than one-half a standard error of estimate above the line was deemed highly effective, a teacher whose class mean fell within plus or minus one-half a standard error of estimate of the prediction line was deemed predictive effective, and a teacher whose class reading mean fell more than one-half a standard error of estimate below the prediction line was deemed less effective. All third-grade teachers and all sixth-grade teachers mean class reading achievement scores were plotted on the appropriate prediction line and teachers were identified as highly effective, predicted effective, or less effective teachers of reading.

In the spring of 1976 identical data were gathered on all third- and sixth-grade teachers. These data were used to generate a 1976 prediction line for third-grade teachers and a 1976 prediction line for sixth-grade teachers. Again, all mean class reading achievement scores of third-

and sixth-grade teachers were plotted in relation to the appropriate grade level prediction line. Identical criteria were used to identify the teachers as highly effective, predictive effective, or less effective teachers of reading.

The 1976 sample of teachers was administered the 1976 edition of the Survey of Teacher Emphases in Reading Instruction (STERI). The STERI was developed by the investigator to assess the amount of instructional emphases given to eight components of a self-contained developmental reading program over a typical six weeks period. The subcategories included (1) ongoing diagnosis, (2) specific diagnosis, (3) comprehension readiness, (4) comprehension following reading, (5) comprehension above the literal level, (6) oral reading, (7) structured reading activities, and (8) reading application. There were 35 items on the questionnaire and the teacher responded by selecting a number which indicated the degree of emphasis given to the statement. For example, "Students are made aware that oral expression can be represented in written form." 1 (never emphasized) 2 (emphasized 1 to 3 times) 3 (emphasized 4 to 6 times) 4 (emphasized 7 to 9 times) 5 (emphasized 10 or more times).

The 1976 edition of the STERI evolved from the 1974 edition. A factor analysis of the 1974 STERI resulted in the identification of the eight subcategories. Items

with a .30 or greater relationship to each other were retained and classified into instructional categories. Chronbach's alpha (1951) for the 1976 edition of the STERI was .88 and reliability coefficients for subcategories ranged from .42 to .68.

Analysis of Data and Findings

To determine stability of teacher effect on pupils' reading achievement over a two year period a product moment correlation was used. A randon sample of 25 teachers was drawn from third-grade teachers (N=61) and a random sample of 25 teachers was drawn from sixth-grade teachers (N=101). Each teacher's 1974 standard deviation from the predicted Y variable (mean class reading achievement) was correlated with the 1976 standard deviation from the predicted Y variable. The resulting R was .95 significant at the .01 level. Thus, the hypothesis that there is no stability between teacher's effect on pupils' reading achievement over a two year period was rejected, and the alternate hypothesis that teacher effect on pupils' reading achievement is stable over a two year period was accepted.

An analysis of variance was performed to test differences in mean emphases reported by the teachers identified as highly effective, predicted effective, and less effective both in 1974 and 1976 (N=41) on the eight subcategories of the STERI.

An alpha level of .15 was established apriori to data analysis. Although this alpha level deviates from those typically cited in psychological and educational research, i.e., .01 or .05, precedence for this decision can be found in the literature. Hays (1973) suggests that "one could (and perhaps should) make the test more powerful by setting the value of alpha at .10, .20, or more" (p. 360). Further, Rupley (1976) indicates, "the historical concept of setting alpha at .05 or less may be inappropriate for research dealing with effective reading instruction. The data base which is presently available for looking at effective reading instruction is minute when compared with the plethora of reading research being conducted. It might be better to say with a seventy percent degree of certainty that effective reading teachers do certain things in their reading instruction, than to say with a ninety-five percent degree of certainty that the characteristics of teacher effectiveness in reading instruction have not been identified" (p. 7).

Significant differences were observed between the emphases reported by stable highly effective teachers of reading and stable predicted effective and stable less effective teachers of reading for the subcategories ongoing diagnosis ($p < .09$), comprehension following reading ($p < .13$), structured reading activities ($p < .02$), and reading application ($p < .14$).

In addition, an analysis of variance was conducted to test differences in mean emphases reported for teachers who were predicted effective in 1974 and shifted to highly effective or shifted to less effective in 1976 (N=21) on the eight subcategories of the STERI. The level of significance was again set at .15.

Significant differences were found between the emphases reported by teachers who shifted upward to highly effective in 1976 from predicted effective in 1974 and teachers who shifted downward in 1976 from predicted effective in 1974 for the subcategories ongoing diagnosis ($p < .07$), comprehension readiness ($p < .11$), comprehension following reading ($p < .09$), structured reading activities ($p < .13$), and reading application ($p < .04$).

Finally, an analysis of variance was performed to test differences in mean emphases reported by teachers identified as highly effective, predicted effective, and less effective teachers of reading for 1976 on the eight subcategories of the STERI. The alpha level of .15 was retained for this analysis.

Significant differences were noted for ongoing diagnosis ($p < .002$), comprehension readiness ($p < .15$), comprehension following reading ($p < .01$), comprehension beyond the literal level ($p < .08$), oral reading ($p < .01$), structured reading activities ($p < .01$), and reading application ($p < .01$).

The means for all three analyses favored the highly

effective teachers. In addition, the means for the predicted effective reading teachers were higher for the significant subcategories than the less effective reading teachers when highly effective, predicted effective, and less effective teacher's emphases were compared.

Conclusions and Recommendations

Conclusions

The following hypotheses were supported by the data across all three analyses:

1. Highly effective teachers of reading report a greater emphases on ongoing diagnosis than do predicted effective and less effective teachers of reading.
2. Highly effective teachers of reading report a greater emphases on comprehension following reading than do predicted effective and less effective teachers of reading.
3. Highly effective teachers of reading report a greater emphases on structured reading activities than do predicted effective and less effective teachers of reading.
4. Highly effective teachers of reading report a greater emphases on reading application than do predicted effective and less effective teachers of reading.

5. Teacher effect on pupils' reading achievement is stable over a two year period.

Discussion of Conclusions

Four of the hypotheses advanced to account for teacher variance in being "successful" in reading instruction were supported by the data of this research. In addition, it was determined that teachers' effect on pupils' level of reading achievement is stable over a two year period.

The importance of teacher emphases in the areas of ongoing diagnosis, comprehension following reading, structured reading activities and reading application becomes more credible due to the fact that across three analyses these four variables significantly favored the highly effective teachers. The teachers who were highly effective in both 1974 and 1976 reported greater instructional emphases in these four areas than the teachers who were predicted effective and less effective in both 1974 and 1976. Also, those teachers who shifted upward to highly upward to highly effective in 1976 from predicted effective in 1974 reported greater instructional emphases in these four areas than those teachers who shifted downward to less effective in 1976 from predicted effective in 1974. Furthermore, ongoing diagnosis, comprehension following reading, structured reading activities, and reading application significantly favored the highly effective teachers for analysis of the 1976 data.

Recommendations

Future research aimed at determining teacher effect on pupils' reading achievement should seriously consider the instructional emphases provided by the teacher in the areas of ongoing diagnosis, comprehension following reading, structured reading activities, and reading application. Not only do these areas warrant further investigation, but future research should focus on the process variables the teacher applies in these four areas. That is, what or how do the stable highly effective teachers deal with the four areas in relation to stable predicted and stable less effective teachers of reading. This task would require data gathering in the actual classroom setting over an extended time period.

References

Bond, G. and Dykstra, R. "The Cooperative Research Program in First Grade Reading Instruction." Reading Research Quarterly 2 (1967): 26-142.

Cronbach, L. "Coefficient Alpha and the Internal Structure of Tests." Psychometrics 16 (1951): 297-334.

Farr, R. and Weintraub, S. "Editorial: Methodolical Incarceration." Reading Research Quarterly 10 (1975): ii-iv.

Hays, W. Statistics for the Social Sciences. New York, N.Y.: Holt, Rinehart and Winston, Inc., 1973.

McNeil, J. and Popham, J. "The Assessment of Teacher Competence." in Second Handbook on Research in Teaching, edited by Travers, pp. 218-224. Chicago, Ill.: Rand McNally and Co., 1973.

Rosenshine, B. "Interpretive Study of Teaching Behavior Related to Student Achievement. Final Report." College of Education, Temple University, 1970.

Rupley, W. "Teacher Instructional Emphases and Student Achievement in Reading." Peabody Journal of Education (In press).

Rutherford, W. "Teacher Improvement in Reading." In Reading Methods and Teacher Improvement," edited by Smith, pp. 124-133. Newark, Delaware: International Reading Association, 1971.

Saadeh, J. "Teacher Effectiveness on Classroom Efficiency: A New Teaching." The Journal of Teacher Education 21 (1970): 73-91.